U.S. ARMY CHEMICAL MATERIALS AGENCY

CREATING A SAFER TOMORROW

DESERET CHEMICAL DEPOT IGLOO CLOSURE STATUS

Briefing for RAB

18 November 2008

STORAGE

DCD CLOSURE TEAM

CAMDS TOCDF

Agenda

- **IGLOO CLOSURE**
  - **Approach**
  - **Storage and Contamination History**
  - **Certification Packages**
  - **Analytical**
  - **Public Involvement**

Igloo Closure – Approach

- **Consistent with CMA Closure Guidance**
  - **Center for Disease Control (CDC) recommendations**
  - **Department of the Army Air Exposure Limits (AELs) Guidance**
  - **U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) recommendations**
- **Consistent with TOCDF Facilities Disposition Plan**
  - **Establishes minimum cleaning requirements**
  - **Defines procedures to determine sampling and release criteria**
  - **Employs risk-based action levels for disposition and handling**
- **SWMU 11 and 2 will be closed separately after igloo closure under RCRA Corrective Action Program**

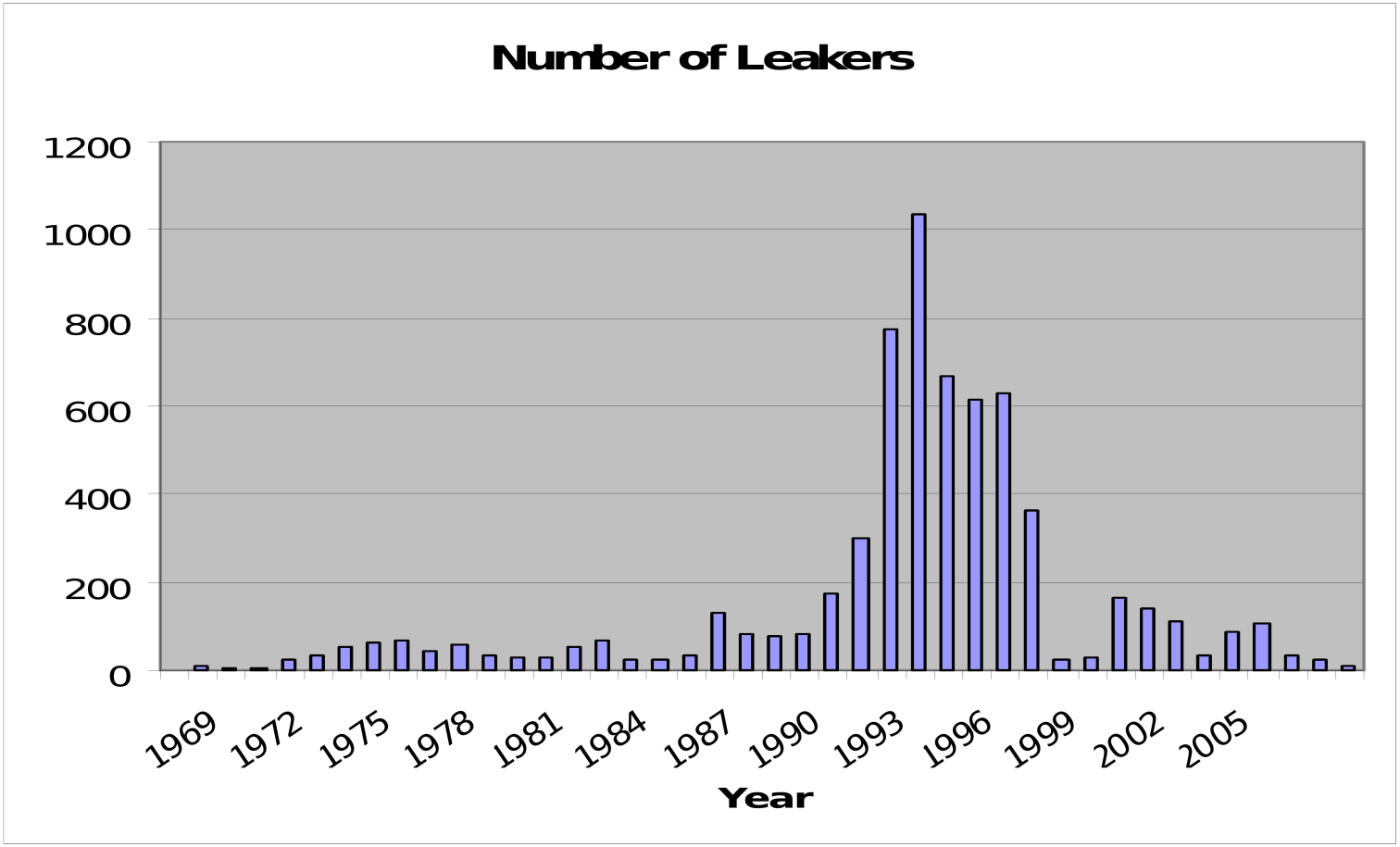
Igloo Closure – Approach

- **Compiled known storage history for all igloos**
  - **Reviewed DCD Inventory Records and Depot Surveillance Records**
- **Compiled known contamination history for all igloos**
  - **Reviewed leaker reports and monitoring records**
- **Clean and clear Igloos as they are emptied**
  - **Decontaminate Both RCRA and Non-RCRA Alike**
  - **Same Methods of Verification**
    - **Air Monitoring to <WPL (<GPL target)**
    - **Concrete chip or core samples (cracks)**
      - **Underlying soil samples (where necessary)**
    - **Igloo Transfer**
  - **Transfer to TEAD via Administrative Process**
  - **Signoff on Closure Certification Package**

Igloo Closure – Storage & Contamination History

- **Storage records comprehensive from 1959**
- **Contamination records comprehensive**
- **57 igloos operated under RCRA Permit**
  - **9 liquid exposed**
  - **15 vapor exposed**
  - **33 never contaminated**
- **151 igloos not permitted**
  - **15 liquid exposed**
  - **28 vapor exposed**
  - **108 never contaminated**

Igloo Closure – Contamination History



Note: Numbers represent all reported agent readings, liquid and vapor

Igloo Closure – Certification Packages

- **Closure Certification Package**
  - **Storage use history**
  - **Contamination history**
  - **Determination of sampling requirements**
  - **Contaminated of Potential Concern determination and closure performance standards**
  - **Inspection for occluded spaces and floor cracks**
  - **Air monitoring results**
  - **Sample location map**
  - **Laboratory analytical results**
  - **QA/QC documentation**
  - **Certified Professional Engineer checklists and review**
  - **Photographs**

Igloo Closure – Sampling Activities

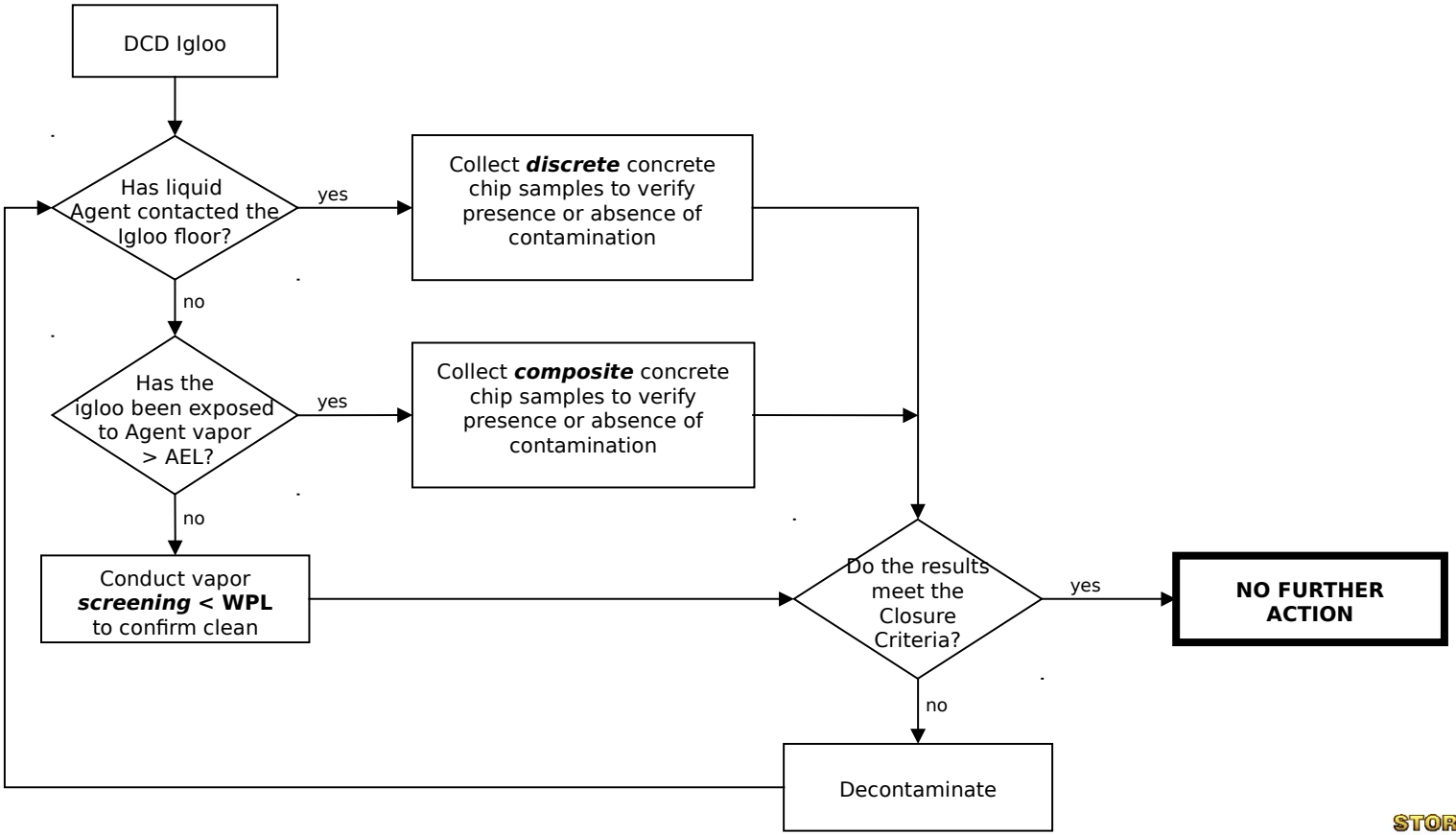
- **Health and Safety Concerns**
  - **Calcium Silicate (concrete) Dust**
    - **Potential carcinogen, requires NIOSH approved respirator**
    - **Requires work space particulate monitoring**
    - **Limit personnel in area of dust generation**
  - **Heat Stress**
  - **Lifting**
  - **Sample Chemicals**
    - **MSDS sheets available for all chemicals**
      - **Isopropyl alcohol**
      - **Hexane**
      - **Deionized and distilled water**
      - **Bleach**
  - **Agent**
    - **RTAP real time agent monitoring during sampling**

Igloo Closure - Laboratory Support

- **CAMDS Laboratory provided agent analysis**
  - **Developed SOPs based on EPA/DSHW approved methods**
  - **Provides twenty-four hour sample analysis response time**

- **Outside Laboratory will analyze for calcium silicate, metals and organic compounds**
  - **CAMDS laboratory will screen for agent**

Sampling Determination


DCD Igloo
Has liquid Agent contacted the Igloo floor?
yes
Collect **discrete** concrete chip samples to verify presence or absence of contamination
no
Has the igloo been exposed to Agent vapor > AEL?
yes
Collect **composite** concrete chip samples to verify presence or absence of contamination
no
Conduct vapor **screening < WPL** to confirm clean
Do the results meet the Closure Criteria?
yes
NO FURTHER ACTION
no
Decontaminate

Igloo Closure – Public Involvement

- **A Class 2 Permit Modification**
  - **Submitted on 30 October 2008**
    - **Revises DCD's RCRA Closure Plan**
    - **Sampling and Analysis Plan**
    - **Quality Assurance Plan**
    - **Health and Safety Plan**
  - **Public comment period October 30 – December 29, 2008**
  - **Public Meeting November 19, 2008**
  - **Documents available for review at Outreach Office**